

Document: PAPER COPY OF SEQUENCE
LISTING, Pages 1 - 39
Attorney Docket No: P-LJ 5037

CERTIFICATE OF MAILING BY "EXPRESS MAIL"

"EXPRESS MAIL" MAILING LABEL NUMBER: EL 857 041 358 US

DATE OF DEPOSIT: November 15, 2001

I HEREBY CERTIFY THAT THIS PAPER OR FEE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE "EXPRESS MAIL POST OFFICE TO ADDRESSEE" SERVICE UNDER 37 CFR 1.10 ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO COMMISSIONER FOR PATENTS, WASHINGTON, D.C. 20231.

Karly Tambara

Printed Name of Person Mailing Paper or Fee

blfamhens

Signature of Person Mailing Paper or Fee

SEQUENCE LISTING

<110> Reed, John C.
Godzik, Adam
Pawlowski, Krzysztof
Fiorentino, Loredana
Lee, Sug Hyung
Roth, Wilfred
Stenner-Liewen, Frank

<120> Novel Death Domain Proteins

<130> P-LJ 5037

<150> 60/301,889
<151> 2001-06-29

<150> 09/715,893
<151> 2000-11-17

<160> 62

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 210
<212> DNA
<213> Homo sapien

<220>
<221> CDS
<222> (1)...(210)

<400> 1
ctt tgg gga aga acc act ctg aaa aga gaa gat aaa agc ccg att gcc 48
Leu Trp Gly Arg Thr Thr Leu Lys Arg Glu Asp Lys Ser Pro Ile Ala
1 5 10 15

ccc gag gaa tta gca ctt gtt cac aac ttg agg aaa atg atg aaa aat 96
Pro Glu Glu Leu Ala Leu Val His Asn Leu Arg Lys Met Met Lys Asn
20 25 30

gat tgg cat gga ggc gcc att gtg tcg gct ttg agc cag act ggg tct 144
Asp Trp His Gly Gly Ala Ile Val Ser Ala Leu Ser Gln Thr Gly Ser
35 40 45

ctc ttt aag ccc cgg aaa gcc tat ctg ccc cag gag ttg ctg gga aag 192
Leu Phe Lys Pro Arg Lys Ala Tyr Leu Pro Gln Glu Leu Leu Gly Lys
50 55 60

gaa gga ttt gat gcc ctg 210
Glu Gly Phe Asp Ala Leu
65 70

<210> 2
<211> 70
<212> PRT
<213> Homo sapien

<400> 2
Leu Trp Gly Arg Thr Thr Leu Lys Arg Glu Asp Lys Ser Pro Ile Ala
1 5 10 15
Pro Glu Glu Leu Ala Leu Val His Asn Leu Arg Lys Met Met Lys Asn
20 25 30
Asp Trp His Gly Gly Ala Ile Val Ser Ala Leu Ser Gln Thr Gly Ser
35 40 45
Leu Phe Lys Pro Arg Lys Ala Tyr Leu Pro Gln Glu Leu Leu Gly Lys
50 55 60
Glu Gly Phe Asp Ala Leu
65 70

<210> 3
<211> 297
<212> DNA
<213> Homo sapien

<220>
<221> CDS
<222> (1) ... (297)

<400> 3
acc agt ttt gct tat cca gct ata cga tat ctt ctg tat gga gag aag 48
Thr Ser Phe Ala Tyr Pro Ala Ile Arg Tyr Leu Leu Tyr Gly Glu Lys
1 5 10 15

gga aca gga aaa acc cta agt ctt tgc cat gtt att cat ttc tgt gca 96
Gly Thr Gly Lys Thr Leu Ser Leu Cys His Val Ile His Phe Cys Ala
20 25 30

aaa cag gac tgg ctg ata cta cat att cca gat gct cat ctt tgg gtg 144
Lys Gln Asp Trp Leu Ile Leu His Ile Pro Asp Ala His Leu Trp Val
35 40 45

aaa aat tgt cgg gat ctt ctg cag tcc agc tac aac aaa cag cgc ttt 192
Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser Tyr Asn Lys Gln Arg Phe
50 55 60

gat caa cct tta gag gct tca acc tgg ctg aag aat ttc aaa act aca 240
Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu Lys Asn Phe Lys Thr Thr
65 70 75 80

aat gag cgc ttc ctg aac cag ata aaa gtt caa gag aag tat gtc tgg 288
Asn Glu Arg Phe Leu Asn Gln Ile Lys Val Gln Glu Lys Tyr Val Trp
85 90 95

aat aag aga 297

Asn Lys Arg

<210> 4
<211> 99
<212> PRT
<213> Homo sapien

<400> 4
Thr Ser Phe Ala Tyr Pro Ala Ile Arg Tyr Leu Leu Tyr Gly Glu Lys
1 5 10 15
Gly Thr Gly Lys Thr Leu Ser Leu Cys His Val Ile His Phe Cys Ala
20 25 30
Lys Gln Asp Trp Leu Ile Leu His Ile Pro Asp Ala His Leu Trp Val
35 40 45
Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser Tyr Asn Lys Gln Arg Phe
50 55 60
Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu Lys Asn Phe Lys Thr Thr
65 70 75 80
Asn Glu Arg Phe Leu Asn Gln Ile Lys Val Gln Glu Lys Tyr Val Trp
85 90 95

Asn Lys Arg

<210> 5
<211> 294
<212> DNA
<213> Homo sapien

<220>
<221> CDS
<222> (1)...(294)

<400> 5
aca tat gtg cgc tgc ctc aat gtt gga cta att agg aag ctg tca gat 48
Thr Tyr Val Arg Cys Leu Asn Val Gly Leu Ile Arg Lys Leu Ser Asp
1 5 10 15

ttt att gat cct caa gaa gga tgg aag aag tta gct gta gct att aaa 96
Phe Ile Asp Pro Gln Glu Gly Trp Lys Lys Leu Ala Val Ala Ile Lys
20 25 30

aaa cca tct ggt gat gat aga tac aat cag ttt cac ata agg aga ttt 144
Lys Pro Ser Gly Asp Asp Arg Tyr Asn Gln Phe His Ile Arg Arg Phe
35 40 45

gaa gca tta ctt caa act gga aaa agt ccc act tct gaa tta ctg ttt 192
Glu Ala Leu Leu Gln Thr Gly Lys Ser Pro Thr Ser Glu Leu Leu Phe
50 55 60

gac tgg ggc acc aca aat tgc aca gtt ggt gat ctt gtg gat ctt ttg 240
Asp Trp Gly Thr Thr Asn Cys Thr Val Gly Asp Leu Val Asp Leu Leu
65 70 75 80

atc caa aat gaa ttt ttt gct cct gcg agt ctt ttg ctc cca gat gct 288
Ile Gln Asn Glu Phe Phe Ala Pro Ala Ser Leu Leu Leu Pro Asp Ala
85 90 95

gtt ccc 294
Val Pro

<210> 6
<211> 98
<212> PRT
<213> Homo sapien

<400> 6
Thr Tyr Val Arg Cys Leu Asn Val Gly Leu Ile Arg Lys Leu Ser Asp
1 5 10 15
Phe Ile Asp Pro Gln Glu Gly Trp Lys Lys Leu Ala Val Ala Ile Lys
20 25 30
Lys Pro Ser Gly Asp Asp Arg Tyr Asn Gln Phe His Ile Arg Arg Phe
35 40 45
Glu Ala Leu Leu Gln Thr Gly Lys Ser Pro Thr Ser Glu Leu Leu Phe
50 55 60
Asp Trp Gly Thr Thr Asn Cys Thr Val Gly Asp Leu Val Asp Leu Leu
65 70 75 80
Ile Gln Asn Glu Phe Phe Ala Pro Ala Ser Leu Leu Leu Pro Asp Ala
85 90 95
Val Pro

<210> 7
<211> 303
<212> DNA
<213> Homo sapien

<220>
<221> CDS
<222> (1)...(303)

<400> 7
tgg gag gag gat gag tgc ctg gac tac tac ggg atg ctg tcg ctt cac 48
Trp Glu Glu Asp Glu Cys Leu Asp Tyr Tyr Gly Met Leu Ser Leu His
1 5 10 15

cgt atg ttc gag gtg gtg ggc ggg caa ctg acc gag tgc gag ctg gag 96
Arg Met Phe Glu Val Val Gly Gly Gln Leu Thr Glu Cys Glu Leu Glu
20 25 30

ctc ctg gcc ttt ctg ctg gat gag gct cct ggc gcc gcc gga ggc tta 144
Leu Leu Ala Phe Leu Leu Asp Glu Ala Pro Gly Ala Ala Gly Gly Leu
35 40 45

gcc cgg gcc cgc agc ggc cta gag ctc ctg ctg gag ctg gag cgc cgc 192

Ala Arg Ala Arg Ser Gly Leu Glu Leu Leu Glu Leu Glu Arg Arg				
50	55	60		
ggg cag tgc gac gag agc aac ctg cgg ctg ctg ggg caa ctc ctg cgc			240	
Gly Gln Cys Asp Glu Ser Asn Leu Arg Leu Leu Gly Gln Leu Leu Arg				
65	70	75	80	
gtg ctg gcc cgc cac gac ctg ctg ccg cac ctg gcg cgc aag cgg cgc			288	
Val Leu Ala Arg His Asp Leu Leu Pro His Leu Ala Arg Lys Arg Arg				
85	90	95		
cgg cca gtg tct cca			303	
Arg Pro Val Ser Pro				
100				

<210> 8
 <211> 101
 <212> PRT
 <213> Homo sapien

<400> 8			
Trp Glu Glu Asp Glu Cys Leu Asp Tyr Tyr Gly Met Leu Ser Leu His			
1	5	10	15
Arg Met Phe Glu Val Val Gly Gly Gln Leu Thr Glu Cys Glu Leu Glu			
20	25	30	
Leu Leu Ala Phe Leu Leu Asp Glu Ala Pro Gly Ala Ala Gly Gly Leu			
35	40	45	
Ala Arg Ala Arg Ser Gly Leu Glu Leu Leu Glu Leu Glu Arg Arg			
50	55	60	
Gly Gln Cys Asp Glu Ser Asn Leu Arg Leu Leu Gly Gln Leu Leu Arg			
65	70	75	80
Val Leu Ala Arg His Asp Leu Leu Pro His Leu Ala Arg Lys Arg Arg			
85	90	95	
Arg Pro Val Ser Pro			
100			

<210> 9
 <211> 195
 <212> DNA
 <213> Chlamydia trachomatis

<220>
 <221> CDS
 <222> (1)...(195)

<400> 9			
gat ttg tgg aag cag ttt gtg ttt gct cta gga gtt act cca gaa gag			48
Asp Leu Trp Lys Gln Phe Val Phe Ala Leu Gly Val Thr Pro Glu Glu			
1	5	10	15
tta gag gct cat gag cct agt gaa gca gca aaa gcg aaa gta gct act			96
Leu Glu Ala His Glu Pro Ser Glu Ala Ala Lys Ala Lys Val Ala Thr			
20	25	30	

ttc atg cggtgg tgg tgc aca gga gat tct tta gct gca gga gtg gct gct 144
Phe Met Arg Trp Cys Thr Gly Asp Ser Leu Ala Ala Gly Val Ala Ala
35 40 45

ttg tat tct tat gag agt caa att cca cgt atc gct aga gag aaa att 192
 Leu Tyr Ser Tyr Glu Ser Gln Ile Pro Arg Ile Ala Arg Glu Lys Ile
 50 55 60

cgt 195
Arg
65

<210> 10
<211> 65
<212> PRT
<213> *Chlamydia trachomatis*

```

<400> 10
Asp Leu Trp Lys Gln Phe Val Phe Ala Leu Gly Val Thr Pro Glu Glu
      1           5           10           15
Leu Glu Ala His Glu Pro Ser Glu Ala Ala Lys Ala Lys Val Ala Thr
      20           25           30
Phe Met Arg Trp Cys Thr Gly Asp Ser Leu Ala Ala Gly Val Ala Ala
      35           40           45
Leu Tyr Ser Tyr Glu Ser Gln Ile Pro Arg Ile Ala Arg Glu Lys Ile
      50           55           60
Arg
65

```

```
<210> 11
<211> 213
<212> DNA
<213> Mus musculus
```

<220>
<221> CDS
<222> (1) ... (213)

<400> 11
cag cag cag gag gaa gtc cag cgg ctc ctg atg atg ggt gag cca gcc 48
Gln Gln Gln Glu Glu Val Gln Arg Leu Leu Met Met Gly Glu Pro Ala
1 5 10 15

aag ggc tgg cag gag ctg gca ggc cac ctc ggc tac caa gct gag gct 96
 Lys Gly Trp Gln Glu Leu Ala Gly His Leu Gly Tyr Gln Ala Glu Ala
 20 25 30

gtg gaa acc atg gcc tgt gac caa atg cca gcc tat acc ctg cta agg 144
 Val Glu Thr Met Ala Cys Asp Gln Met Pro Ala Tyr Thr Leu Leu Arg
 35 40 45

aac tgg qct qcc caa gaa ggc aat aag qct acc ctc aga gtg ctg gag 192

Asn Trp Ala Ala Gln Glu Gly Asn Arg Ala Thr Leu Arg Val Leu Glu
50 55 60

gat gct ctg gct gcc ata ggc 213
Asp Ala Leu Ala Ala Ile Gly
65 70

<210> 12
<211> 71
<212> PRT
<213> Mus musculus

<400> 12
Gln Gln Gln Glu Glu Val Gln Arg Leu Leu Met Met Gly Glu Pro Ala
1 5 10 15
Lys Gly Trp Gln Glu Leu Ala Gly His Leu Gly Tyr Gln Ala Glu Ala
20 25 30
Val Glu Thr Met Ala Cys Asp Gln Met Pro Ala Tyr Thr Leu Leu Arg
35 40 45
Asn Trp Ala Ala Gln Glu Gly Asn Arg Ala Thr Leu Arg Val Leu Glu
50 55 60
Asp Ala Leu Ala Ala Ile Gly
65 70

<210> 13
<211> 1605
<212> DNA
<213> Homo sapien

<220>
<221> CDS
<222> (74) ... (1267)

<400> 13
gaattccgcc ggccccaggc agcgtgtgtc ggtcgccctag gctggagaac tagtcctcga 60
ctcacgtgca agg atg atg ctg aaa gga ata aca agg ctt atc tct agg 109
Met Met Leu Lys Gly Ile Thr Arg Leu Ile Ser Arg
1 5 10

atc cat aag ttg gac cct ggg cgt ttt tta cac atg ggg acc cag gag gct 157
Ile His Lys Leu Asp Pro Gly Arg Phe Leu His Met Gly Thr Gln Ala
15 20 25

cgc caa agc att gct gct cac cta gat aac cag gtt cca gtt gag agt 205
Arg Gln Ser Ile Ala Ala His Leu Asp Asn Gln Val Pro Val Glu Ser
30 35 40

ccg aga gct att tcc cgc acc aat gag aat gac ccg gcc aag cat ggg 253
Pro Arg Ala Ile Ser Arg Thr Asn Glu Asn Asp Pro Ala Lys His Gly
45 50 55 60

gat cag cac gag ggt cag cac tac aac atc tcc ccc cag gat ttg gag 301
Asp Gln His Glu Gly Gln His Tyr Asn Ile Ser Pro Gln Asp Leu Glu

65

70

75

act gta ttt ccc cat ggc ctt cct cct cgc ttt gtg atg cag gtg aag 349
 Thr Val Phe Pro His Gly Leu Pro Pro Arg Phe Val Met Gln Val Lys
 80 85 90

aca ttc agt gaa gct tgc ctg atg gta agg aaa cca gcc cta gaa ctt 397
 Thr Phe Ser Glu Ala Cys Leu Met Val Arg Lys Pro Ala Leu Glu Leu
 95 100 105

ctg cat tac ctg aaa aac acc agt ttt gct tat cca gct ata cga tat 445
 Leu His Tyr Leu Lys Asn Thr Ser Phe Ala Tyr Pro Ala Ile Arg Tyr
 110 115 120

ctt ctg tat gga gag aag gga aca gga aaa acc cta agt ctt tgc cat 493
 Leu Leu Tyr Gly Glu Lys Gly Thr Gly Lys Thr Leu Ser Leu Cys His
 125 130 135 140

gtt att cat ttc tgt gca aaa cag gac tgg ctg ata cta cat att cca 541
 Val Ile His Phe Cys Ala Lys Gln Asp Trp Leu Ile Leu His Ile Pro
 145 150 155

gat gct cat ctt tgg gtg aaa aat tgt cgg gat ctt ctg cag tcc agc 589
 Asp Ala His Leu Trp Val Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser
 160 165 170

tac aac aaa cag cgc ttt gat caa cct tta gag gct tca acc tgg ctg 637
 Tyr Asn Lys Gln Arg Phe Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu
 175 180 185

aag aat ttc aaa act aca aat gag cgc ttc ctg aac cag ata aaa gtt 685
 Lys Asn Phe Lys Thr Thr Asn Glu Arg Phe Leu Asn Gln Ile Lys Val
 190 195 200

caa gag aag tat gtc tgg aat aag aga gaa agc act gag aaa ggg agt 733
 Gln Glu Lys Tyr Val Trp Asn Lys Arg Glu Ser Thr Glu Lys Gly Ser
 205 210 215 220

cct ctg gga gaa gtg gtt gaa cag ggc ata aca cgg gtg agg aac gcc 781
 Pro Leu Gly Glu Val Val Glu Gln Gly Ile Thr Arg Val Arg Asn Ala
 225 230 235

aca gat gca gtt gga att gtg ctg aaa gag cta aag agg caa agt tct 829
 Thr Asp Ala Val Gly Ile Val Leu Lys Glu Leu Lys Arg Gln Ser Ser
 240 245 250

ttg ggt atg ttt cac ctc cta gtg gcc gtg gat gga atc aat gct ctt 877
 Leu Gly Met Phe His Leu Leu Val Ala Val Asp Gly Ile Asn Ala Leu
 255 260 265

tgg gga aga acc act ctg aaa aga gaa gat aaa agc ccg att gcc ccc 925
 Trp Gly Arg Thr Thr Leu Lys Arg Glu Asp Lys Ser Pro Ile Ala Pro
 270 275 280

gag gaa tta gca ctt gtt cac aac ttg agg aaa atg atg aaa aat gat 973

Glu Glu Leu Ala Leu Val His Asn Leu Arg Lys Met Met Lys Asn Asp
 285 290 295 300
 tgg cat gga ggc gcc att gtg tcg gct ttg agc cag act ggg tct ctc 1021
 Trp His Gly Gly Ala Ile Val Ser Ala Leu Ser Gln Thr Gly Ser Leu
 305 310 315
 ttt aag ccc cgaaaa gcc tat ctg ccc cag gag ttg ctg gga aag gaa 1069
 Phe Lys Pro Arg Lys Ala Tyr Leu Pro Gln Glu Leu Leu Gly Lys Glu
 320 325 330
 gga ttt gat gcc ctg gat ccc att ccc atc ctg gtt tcc aac tat 1117
 Gly Phe Asp Ala Leu Asp Pro Phe Ile Pro Ile Leu Val Ser Asn Tyr
 335 340 345
 aac cca aag gaa ttt gaa agt tgt att cag tat tat ttg gaa aac aat 1165
 Asn Pro Lys Glu Phe Ser Cys Ile Gln Tyr Tyr Leu Glu Asn Asn
 350 355 360
 tgg ctt caa cat gag aaa gct cct aca gaa gaa ggg aaa aaa gag ctg 1213
 Trp Leu Gln His Glu Lys Ala Pro Thr Glu Glu Gly Lys Lys Glu Leu
 365 370 375 380
 ctg ttc cta agt aac gcg aac ccc tcg ctg ctg gag cgg cac tgt gcc 1261
 Leu Phe Leu Ser Asn Ala Asn Pro Ser Leu Leu Glu Arg His Cys Ala
 385 390 395
 tac ctc taagccaaga tcacagcatg tgaggaagac agtggacatc tgctttatgc 1317
 Tyr Leu

 tggacccagt aagatgagga agtcggcag tacacaggaa gaggagccag gcccttgac 1377
 ctatggatt ggacaggact gcagttggct ctggaccctgc attaaaatgg gtttcactgt 1437
 gaatgcgtga caataagata ttccctgtt cctaaaactt tatatcagtt tattggatgt 1497
 gtttttcac atttaagata attatggctc tttcctaaa aaataaaaata tctttctaaa 1557
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1605

 <210> 14
 <211> 398
 <212> PRT
 <213> Homo sapien

 <400> 14
 Met Met Leu Lys Gly Ile Thr Arg Leu Ile Ser Arg Ile His Lys Leu
 1 5 10 15
 Asp Pro Gly Arg Phe Leu His Met Gly Thr Gln Ala Arg Gln Ser Ile
 20 25 30
 Ala Ala His Leu Asp Asn Gln Val Pro Val Glu Ser Pro Arg Ala Ile
 35 40 45
 Ser Arg Thr Asn Glu Asn Asp Pro Ala Lys His Gly Asp Gln His Glu
 50 55 60
 Gly Gln His Tyr Asn Ile Ser Pro Gln Asp Leu Glu Thr Val Phe Pro
 65 70 75 80
 His Gly Leu Pro Pro Arg Phe Val Met Gln Val Lys Thr Phe Ser Glu
 85 90 95

Ala Cys Leu Met Val Arg Lys Pro Ala Leu Glu Leu Leu His Tyr Leu
 100 105 110
 Lys Asn Thr Ser Phe Ala Tyr Pro Ala Ile Arg Tyr Leu Leu Tyr Gly
 115 120 125
 Glu Lys Gly Thr Gly Lys Thr Leu Ser Leu Cys His Val Ile His Phe
 130 135 140
 Cys Ala Lys Gln Asp Trp Leu Ile Leu His Ile Pro Asp Ala His Leu
 145 150 155 160
 Trp Val Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser Tyr Asn Lys Gln
 165 170 175
 Arg Phe Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu Lys Asn Phe Lys
 180 185 190
 Thr Thr Asn Glu Arg Phe Leu Asn Gln Ile Lys Val Gln Glu Lys Tyr
 195 200 205
 Val Trp Asn Lys Arg Glu Ser Thr Glu Lys Gly Ser Pro Leu Gly Glu
 210 215 220
 Val Val Glu Gln Gly Ile Thr Arg Val Arg Asn Ala Thr Asp Ala Val
 225 230 235 240
 Gly Ile Val Leu Lys Glu Leu Lys Arg Gln Ser Ser Leu Gly Met Phe
 245 250 255
 His Leu Leu Val Ala Val Asp Gly Ile Asn Ala Leu Trp Gly Arg Thr
 260 265 270
 Thr Leu Lys Arg Glu Asp Lys Ser Pro Ile Ala Pro Glu Glu Leu Ala
 275 280 285
 Leu Val His Asn Leu Arg Lys Met Met Lys Asn Asp Trp His Gly Gly
 290 295 300
 Ala Ile Val Ser Ala Leu Ser Gln Thr Gly Ser Leu Phe Lys Pro Arg
 305 310 315 320
 Lys Ala Tyr Leu Pro Gln Glu Leu Leu Gly Lys Glu Gly Phe Asp Ala
 325 330 335
 Leu Asp Pro Phe Ile Pro Ile Leu Val Ser Asn Tyr Asn Pro Lys Glu
 340 345 350
 Phe Glu Ser Cys Ile Gln Tyr Tyr Leu Glu Asn Asn Trp Leu Gln His
 355 360 365
 Glu Lys Ala Pro Thr Glu Glu Gly Lys Lys Glu Leu Leu Phe Leu Ser
 370 375 380
 Asn Ala Asn Pro Ser Leu Leu Glu Arg His Cys Ala Tyr Leu
 385 390 395

<210> 15
 <211> 1383
 <212> DNA
 <213> Homo sapien

<220>
 <221> CDS
 <222> (1)...(1380)

<400> 15
 atg aac aaa ccc ata aca cca tca aca tat gtg cgc tgc ctc aat gtt 48
 Met Asn Lys Pro Ile Thr Pro Ser Thr Tyr Val Arg Cys Leu Asn Val
 1 5 10 15

gga cta att agg aag ctg tca gat ttt att gat cct caa gaa gga tgg 96

Gly Leu Ile Arg Lys Leu Ser Asp Phe Ile Asp Pro Gln Glu Gly Trp			
20	25	30	
aag aag tta gct gta gct att aaa aaa cca tct ggt gat gat aga tac			144
Lys Lys Leu Ala Val Ala Ile Lys Lys Pro Ser Gly Asp Asp Arg Tyr			
35	40	45	
aat cag ttt cac ata agg aga ttt gaa gca tta ctt caa act gga aaa			192
Asn Gln Phe His Ile Arg Arg Phe Glu Ala Leu Leu Gln Thr Gly Lys			
50	55	60	
agt ccc act tct gaa tta ctg ttt gac tgg ggc acc aca aat tgc aca			240
Ser Pro Thr Ser Glu Leu Leu Phe Asp Trp Gly Thr Thr Asn Cys Thr			
65	70	75	80
gtt ggt gat ctt gtg gat ctt ttg atc caa aat gaa ttt ttt gct cct			288
Val Gly Asp Leu Val Asp Leu Leu Ile Gln Asn Glu Phe Phe Ala Pro			
85	90	95	
gcg agt ctt ttg ctc cca gat gct gtt ccc aaa act gct aat aca cta			336
Ala Ser Leu Leu Leu Pro Asp Ala Val Pro Lys Thr Ala Asn Thr Leu			
100	105	110	
cct tct aaa gaa gct ata aca gtt cag caa aaa cag atg cct ttc tgt			384
Pro Ser Lys Glu Ala Ile Thr Val Gln Gln Lys Gln Met Pro Phe Cys			
115	120	125	
gac aaa gac agg aca ttg atg aca cct gtg cag aat ctt gaa caa agc			432
Asp Lys Asp Arg Thr Leu Met Thr Pro Val Gln Asn Leu Glu Gln Ser			
130	135	140	
tat atg cca cct gac tcc tca agt cca gaa aat aaa agt tta gaa gtt			480
Tyr Met Pro Pro Asp Ser Ser Pro Glu Asn Lys Ser Leu Glu Val			
145	150	155	160
agt gat aca cgt ttt cac agt ttt tca ttt tat gaa ttg aag aat gtc			528
Ser Asp Thr Arg Phe His Ser Phe Ser Phe Tyr Glu Leu Lys Asn Val			
165	170	175	
aca aat aac ttt gat gaa cga ccc att tct gtt ggt ggt aat aaa atg			576
Thr Asn Asn Phe Asp Glu Arg Pro Ile Ser Val Gly Gly Asn Lys Met			
180	185	190	
gga gag gga gga ttt gga gtt gta tat aaa ggc tac gta aat aac aca			624
Gly Glu Gly Gly Phe Gly Val Val Tyr Lys Gly Tyr Val Asn Asn Thr			
195	200	205	
act gtg gca gtg aag aag ctt gca gca atg gtt gac att act act gaa			672
Thr Val Ala Val Lys Lys Leu Ala Ala Met Val Asp Ile Thr Thr Glu			
210	215	220	
gaa ctg aaa cag cag ttt gat caa gaa ata aaa gta atg gca aag tgt			720
Glu Leu Lys Gln Gln Phe Asp Gln Glu Ile Lys Val Met Ala Lys Cys			
225	230	235	240

caa cat gaa aac tta gta gaa cta ctt ggt ttc tca agt gat gga gat		768	
Gln His Glu Asn Leu Val Glu Leu Leu Gly Phe Ser Ser Asp Gly Asp			
245	250	255	
gac ctc tgc tta gta tat gtt tac atg cct aat ggt tca ttg cta gac		816	
Asp Leu Cys Leu Val Tyr Val Tyr Met Pro Asn Gly Ser Leu Leu Asp			
260	265	270	
aga ctc tct tgc ttg gat ggt act cca cca ctt tct tgg cac atg aga		864	
Arg Leu Ser Cys Leu Asp Gly Thr Pro Pro Leu Ser Trp His Met Arg			
275	280	285	
tgc aag att gct cag ggt gca gct aat ggc atc aat ttt cta cat gaa		912	
Cys Lys Ile Ala Gln Gly Ala Ala Asn Gly Ile Asn Phe Leu His Glu			
290	295	300	
aat cat cat att cat aga gat att aaa agt gca aat atc tta ctg gat		960	
Asn His His Ile His Arg Asp Ile Lys Ser Ala Asn Ile Leu Leu Asp			
305	310	315	320
gaa gct ttt act gct aaa ata tct gac ttt ggc ctt gca cgg gct tct		1008	
Glu Ala Phe Thr Ala Lys Ile Ser Asp Phe Gly Leu Ala Arg Ala Ser			
325	330	335	
gag aag ttt gcc cag aca gtc atg act agc aga att gtg gga aca aca		1056	
Glu Lys Phe Ala Gln Thr Val Met Thr Ser Arg Ile Val Gly Thr Thr			
340	345	350	
gct tat atg gca cca gaa gct ttg cgt gga gaa ata aca ccc aaa tct		1104	
Ala Tyr Met Ala Pro Glu Ala Leu Arg Gly Glu Ile Thr Pro Lys Ser			
355	360	365	
gat att tac agc ttt ggt gtg gtt tta cta gaa ata ata act gga ctt		1152	
Asp Ile Tyr Ser Phe Gly Val Val Leu Leu Glu Ile Ile Thr Gly Leu			
370	375	380	
cca gct gtg gat gaa cac cgt gaa cct cag tta ttg cta gat att aaa		1200	
Pro Ala Val Asp Glu His Arg Glu Pro Gln Leu Leu Leu Asp Ile Lys			
385	390	395	400
gaa gaa att gaa gat gaa gaa aag aca att gaa gat tat att gat aaa		1248	
Glu Glu Ile Glu Asp Glu Glu Lys Thr Ile Glu Asp Tyr Ile Asp Lys			
405	410	415	
aag atg aat gat gct gat tcc act tca gtt gaa gct atg tac tct gtt		1296	
Lys Met Asn Asp Ala Asp Ser Thr Ser Val Glu Ala Met Tyr Ser Val			
420	425	430	
gct agt caa tgt ctg cat gaa aag aaa aat aag aga cca gac att aag		1344	
Ala Ser Gln Cys Leu His Glu Lys Lys Asn Lys Arg Pro Asp Ile Lys			
435	440	445	
aag gtt caa cag ctg ctg caa gag atg aca gct tct taa		1383	
Lys Val Gln Gln Leu Leu Gln Glu Met Thr Ala Ser			
450	455	460	

<210> 16
<211> 460
<212> PRT
<213> Homo sapien

<400> 16
Met Asn Lys Pro Ile Thr Pro Ser Thr Tyr Val Arg Cys Leu Asn Val
1 5 10 15
Gly Leu Ile Arg Lys Leu Ser Asp Phe Ile Asp Pro Gln Glu Gly Trp
20 25 30
Lys Lys Leu Ala Val Ala Ile Lys Lys Pro Ser Gly Asp Asp Arg Tyr
35 40 45
Asn Gln Phe His Ile Arg Arg Phe Glu Ala Leu Leu Gln Thr Gly Lys
50 55 60
Ser Pro Thr Ser Glu Leu Leu Phe Asp Trp Gly Thr Thr Asn Cys Thr
65 70 75 80
Val Gly Asp Leu Val Asp Leu Leu Ile Gln Asn Glu Phe Phe Ala Pro
85 90 95
Ala Ser Leu Leu Pro Asp Ala Val Pro Lys Thr Ala Asn Thr Leu
100 105 110
Pro Ser Lys Glu Ala Ile Thr Val Gln Gln Lys Gln Met Pro Phe Cys
115 120 125
Asp Lys Asp Arg Thr Leu Met Thr Pro Val Gln Asn Leu Glu Gln Ser
130 135 140
Tyr Met Pro Pro Asp Ser Ser Pro Glu Asn Lys Ser Leu Glu Val
145 150 155 160
Ser Asp Thr Arg Phe His Ser Phe Ser Phe Tyr Glu Leu Lys Asn Val
165 170 175
Thr Asn Asn Phe Asp Glu Arg Pro Ile Ser Val Gly Asn Lys Met
180 185 190
Gly Glu Gly Gly Phe Gly Val Val Tyr Lys Gly Tyr Val Asn Asn Thr
195 200 205
Thr Val Ala Val Lys Lys Leu Ala Ala Met Val Asp Ile Thr Thr Glu
210 215 220
Glu Leu Lys Gln Gln Phe Asp Gln Glu Ile Lys Val Met Ala Lys Cys
225 230 235 240
Gln His Glu Asn Leu Val Glu Leu Leu Gly Phe Ser Ser Asp Gly Asp
245 250 255
Asp Leu Cys Leu Val Tyr Val Tyr Met Pro Asn Gly Ser Leu Leu Asp
260 265 270
Arg Leu Ser Cys Leu Asp Gly Thr Pro Pro Leu Ser Trp His Met Arg
275 280 285
Cys Lys Ile Ala Gln Gly Ala Ala Asn Gly Ile Asn Phe Leu His Glu
290 295 300
Asn His His Ile His Arg Asp Ile Lys Ser Ala Asn Ile Leu Leu Asp
305 310 315 320
Glu Ala Phe Thr Ala Lys Ile Ser Asp Phe Gly Leu Ala Arg Ala Ser
325 330 335
Glu Lys Phe Ala Gln Thr Val Met Thr Ser Arg Ile Val Gly Thr Thr
340 345 350
Ala Tyr Met Ala Pro Glu Ala Leu Arg Gly Glu Ile Thr Pro Lys Ser
355 360 365
Asp Ile Tyr Ser Phe Gly Val Val Leu Leu Glu Ile Thr Gly Leu

370	375	380
Pro Ala Val Asp Glu His Arg Glu Pro Gln Leu	Leu Leu Asp Ile Lys	
385 390 395 400		
Glu Glu Ile Glu Asp Glu Glu Lys Thr Ile Glu Asp Tyr Ile Asp Lys		
405 410 415		
Lys Met Asn Asp Ala Asp Ser Thr Ser Val Glu Ala Met Tyr Ser Val		
420 425 430		
Ala Ser Gln Cys Leu His Glu Lys Lys Asn Lys Arg Pro Asp Ile Lys		
435 440 445		
Lys Val Gln Gln Leu Leu Gln Glu Met Thr Ala Ser		
450 455 460		

<210> 17
<211> 1924
<212> DNA
<213> Homo sapien

<220>
<221> CDS
<222> (91) ... (1044)

<221> misc_feature
<222> (1) ... (1900)
<223> n = A,T,C or G

<400> 17
ccaaaacaag tggctgcggc gtcgcccagg agtcatcgga cgccagaatc tggccgggtt 60
ctgagcttgt tccgcctccc tcccccgaaa atg gcg cta tcc ggg tcg acc acc 114
Met Ala Leu Ser Gly Ser Thr Pro
1 5

gcc ccg tgc tgg gag gag gat gag tgc ctg gac tac tac ggg atg ctg 162
Ala Pro Cys Trp Glu Glu Asp Glu Cys Leu Asp Tyr Tyr Gly Met Leu
10 15 20

tcg ctt cac cgt atg ttc gag gtg gtg ggc ggg caa ctg acc gag tgc 210
Ser Leu His Arg Met Phe Glu Val Val Gly Gly Gln Leu Thr Glu Cys
25 30 35 40

gag ctg gag ctc ctg gcc ttt ctg ctg gat gag gct cct ggc gcc gcc 258
Glu Leu Glu Leu Leu Ala Phe Leu Leu Asp Glu Ala Pro Gly Ala Ala
45 50 55

gga ggc tta gcc cgg gcc cgc agc ggc cta gag ctc ctg ctg gag ctg 306
Gly Gly Leu Ala Arg Ala Arg Ser Gly Leu Glu Leu Leu Glu Leu
60 65 70

gag cgc cgc ggg cag tgc gac gag agc aac ctg cgg ctg ctg ggg caa 354
Glu Arg Arg Gly Gln Cys Asp Glu Ser Asn Leu Arg Leu Leu Gly Gln
75 80 85

ctc ctg cgc gtg ctg gcc cgc cac gac ctg ctg cgg cac ctg gcg cgc 402
Leu Leu Arg Val Leu Ala Arg His Asp Leu Leu Pro His Leu Ala Arg
90 95 100

aag	cgg	cgc	cgg	cca	gtg	tct	cca	gaa	cgc	tat	agc	tat	ggc	acc	tcc	450
Lys	Arg	Arg	Arg	Pro	Val	Ser	Pro	Glu	Arg	Tyr	Ser	Tyr	Gly	Thr	Ser	
105				110				115						120		
agc	tct	tca	aag	agg	aca	gag	ggt	agc	tgc	cgt	cgc	cgt	cgg	cag	tca	498
Ser	Ser	Ser	Lys	Arg	Thr	Glu	Gly	Ser	Cys	Arg	Arg	Arg	Arg	Gln	Ser	
125				130				135								
agc	agt	tct	gca	aat	tct	cag	cag	ggt	cag	tgg	gag	aca	ggc	tcc	ccc	546
Ser	Ser	Ser	Ala	Asn	Ser	Gln	Gln	Gly	Gln	Trp	Glu	Thr	Gly	Ser	Pro	
140				145				150								
cca	acc	aag	cgg	cag	cgg	agt	cgg	ggc	cgg	ccc	agt	ggt	ggt	gcc	594	
Pro	Thr	Lys	Arg	Gln	Arg	Ser	Arg	Gly	Arg	Pro	Ser	Gly	Gly	Ala		
155				160				165								
aga	cgg	cgg	cgg	aga	ggg	gcc	cca	gca	ccc	cag	cag	cag	tca	gag	642	
Arg	Arg	Arg	Arg	Gly	Ala	Pro	Ala	Ala	Pro	Gln	Gln	Gln	Ser	Glu		
170				175				180								
ccc	gcc	aga	cct	tcc	tct	gaa	ggc	aaa	gtg	acc	tgt	gac	atc	cgg	ctc	690
Pro	Ala	Arg	Pro	Ser	Ser	Glu	Gly	Lys	Val	Thr	Cys	Asp	Ile	Arg	Leu	
185				190				195					200			
cgg	gtt	cga	gca	gag	tac	tgc	gag	cat	ggg	cca	gcc	ttg	gag	cag	ggc	738
Arg	Val	Arg	Ala	Glu	Tyr	Cys	Glu	His	Gly	Pro	Ala	Leu	Glu	Gln	Gly	
205				210				215								
gtg	gca	tcc	cgg	cgg	ccc	cag	gcg	ctg	gcg	cgg	cag	ctg	gac	gtg	ttt	786
Val	Ala	Ser	Arg	Arg	Pro	Gln	Ala	Leu	Ala	Arg	Gln	Leu	Asp	Val	Phe	
220				225				230								
ggg	cag	gcc	acc	gca	gtg	ctg	cgc	tca	agg	gac	ctg	ggc	tct	gtg	gtt	834
Gly	Gln	Ala	Thr	Ala	Val	Leu	Arg	Ser	Arg	Asp	Leu	Gly	Ser	Val	Val	
235				240				245								
tgt	gac	atc	aag	ttc	tca	gag	ctc	tcc	tat	ctg	gac	gcc	ttc	tgg	ggc	882
Cys	Asp	Ile	Lys	Phe	Ser	Glu	Leu	Ser	Tyr	Leu	Asp	Ala	Phe	Trp	Gly	
250				255				260								
gac	tac	ctg	agt	ggc	gcc	ctg	ctg	cag	gcc	ctg	cgg	ggc	gtg	ttc	ctg	930
Asp	Tyr	Leu	Ser	Gly	Ala	Leu	Leu	Gln	Ala	Leu	Arg	Gly	Val	Phe	Leu	
265				270				275					280			
act	gag	gcc	ctg	cga	gag	gct	gtg	ggc	cgg	gag	gct	gtt	cgc	ctg	ctg	978
Thr	Glu	Ala	Leu	Arg	Glu	Ala	Val	Gly	Arg	Glu	Ala	Val	Arg	Leu	Leu	
285				290				295								
gtc	agt	gtg	gat	gag	gct	gac	tat	gag	gct	ggc	cgg	cgc	cgc	ctg	ttg	1026
Val	Ser	Val	Asp	Glu	Ala	Asp	Tyr	Glu	Ala	Gly	Arg	Arg	Arg	Arg	Leu	Leu
300				305				310								
ctg	atg	gag	gag	gaa	ggg	gggcggcgcc	cgacagaggc	ctcctgatcc							1074	
Leu	Met	Glu	Glu	Gly												

aggactggca ggattgatcc cacccaag tctccgggcc accttctcct gggaggacga 1134
 ccatctctac cccttagagga ctgtcactct agcatcttg aggactgcga caggaccggg 1194
 acagcaggcc ccttgacagc ccctccaca ggtatgtggc tctgaggcct aaaccattc 1254
 cagctgagtt tccttccag actcctccta ccccaggtgt gccccattcg cctccggacg 1314
 cggcggctgg gcctgtatct cagaagggag gggcacagct acacactcac caaaggcccc 1374
 cctgcacatt gtatctctga tcttggctg tttgcactgt cacaggtgca cacactcgct 1434
 catgctcaca ctgcccctgc tgagatctc ctggccctc gcccggcct gttcccgac 1494
 cacactttt tggcctaagg gcttctttt caggacctt aatttgcacca ccaacccaaa 1554
 ctggggtttc agccaaaatc agtgggact ggagctggg tgcacatggg gcctgctcac 1614
 cttgcccaca natttccagc cagccaggc cctgcccagc ttcaatttac agacctgact 1674
 ntcctcacct tccccctgc tgtccagac tgaacataga cttgcacttg gatgtcacct 1734
 ggagtgtcac atggagtgat tatggcagca tcataccaag gcctactgtt gcacatggg 1794
 cccaaaccag taaacagcca ccttnttgg aagggaatgc aaaggcttg ggggtatgg 1854
 aaaagacctt ttacaaatga taccaattaa actgcccctgg aaaggcata ggtggcaaa 1914
 aaaaaaaaaa 1924

<210> 18
 <211> 318
 <212> PRT
 <213> Homo sapien

<400> 18
 Met Ala Leu Ser Gly Ser Thr Pro Ala Pro Cys Trp Glu Glu Asp Glu
 1 5 10 15
 Cys Leu Asp Tyr Tyr Gly Met Leu Ser Leu His Arg Met Phe Glu Val
 20 25 30
 Val Gly Gly Gln Leu Thr Glu Cys Glu Leu Glu Leu Leu Ala Phe Leu
 35 40 45
 Leu Asp Glu Ala Pro Gly Ala Ala Gly Gly Leu Ala Arg Ala Arg Ser
 50 55 60
 Gly Leu Glu Leu Leu Glu Leu Glu Arg Arg Gly Gln Cys Asp Glu
 65 70 75 80
 Ser Asn Leu Arg Leu Leu Gly Gln Leu Leu Arg Val Leu Ala Arg His
 85 90 95
 Asp Leu Leu Pro His Leu Ala Arg Lys Arg Arg Arg Pro Val Ser Pro
 100 105 110
 Glu Arg Tyr Ser Tyr Gly Thr Ser Ser Ser Ser Lys Arg Thr Glu Gly
 115 120 125
 Ser Cys Arg Arg Arg Arg Gln Ser Ser Ser Ser Ala Asn Ser Gln Gln
 130 135 140
 Gly Gln Trp Glu Thr Gly Ser Pro Pro Thr Lys Arg Gln Arg Arg Ser
 145 150 155 160
 Arg Gly Arg Pro Ser Gly Gly Ala Arg Arg Arg Arg Arg Gly Ala Pro
 165 170 175
 Ala Ala Pro Gln Gln Ser Glu Pro Ala Arg Pro Ser Ser Glu Gly
 180 185 190
 Lys Val Thr Cys Asp Ile Arg Leu Arg Val Arg Ala Glu Tyr Cys Glu
 195 200 205
 His Gly Pro Ala Leu Glu Gln Gly Val Ala Ser Arg Arg Pro Gln Ala
 210 215 220
 Leu Ala Arg Gln Leu Asp Val Phe Gly Gln Ala Thr Ala Val Leu Arg
 225 230 235 240
 Ser Arg Asp Leu Gly Ser Val Val Cys Asp Ile Lys Phe Ser Glu Leu

245	250	255
Ser Tyr Leu Asp Ala Phe Trp Gly Asp Tyr Leu Ser Gly Ala Leu Leu		
260	265	270
Gln Ala Leu Arg Gly Val Phe Leu Thr Glu Ala Leu Arg Glu Ala Val		
275	280	285
Gly Arg Glu Ala Val Arg Leu Leu Val Ser Val Asp Glu Ala Asp Tyr		
290	295	300
Glu Ala Gly Arg Arg Leu Leu Leu Met Glu Glu Glu Gly		
305	310	315

<210> 19
<211> 696
<212> DNA
<213> Chlamydia trachomatis

<220>
<221> CDS
<222> (1)...(693)

<400> 19			
atg atg gag gtg ttt atg aat ttt tta gat cag tta gat tta att att			48
Met Met Glu Val Phe Met Asn Phe Leu Asp Gln Leu Asp Leu Ile Ile			
1	5	10	15
caa aat aag cat atg cta gaa cac acg ttt tat gtg aaa tgg tcg aag			96
Gln Asn Lys His Met Leu Glu His Thr Phe Tyr Val Lys Trp Ser Lys			
20	25	30	
ggg gag ctt act aaa gag caa tta cag gcg tat gcc aaa gac tat tat			144
Gly Glu Leu Thr Lys Glu Gln Leu Gln Ala Tyr Ala Lys Asp Tyr Tyr			
35	40	45	
tta cat atc aaa gcc ttt cct aaa tat tta tct gcg att cat agt cgt			192
Leu His Ile Lys Ala Phe Pro Lys Tyr Leu Ser Ala Ile His Ser Arg			
50	55	60	
tgc gat gat tta gag gcg cgt aag tta ttg tta gat aac ttg atg gat			240
Cys Asp Asp Leu Glu Ala Arg Lys Leu Leu Asp Asn Leu Met Asp			
65	70	75	80
gaa gag aac ggt tac cct aat cat att gat ttg tgg aag cag ttt gtg			288
Glu Glu Asn Gly Tyr Pro Asn His Ile Asp Leu Trp Lys Gln Phe Val			
85	90	95	
ttt gct cta gga gtt act cca gaa gag tta gag gct cat gag cct agt			336
Phe Ala Leu Gly Val Thr Pro Glu Glu Leu Glu Ala His Glu Pro Ser			
100	105	110	
gaa gca gca aaa gcg aaa gta gct act ttc atg cgg tgg tgt aca gga			384
Glu Ala Ala Lys Ala Lys Val Ala Thr Phe Met Arg Trp Cys Thr Gly			
115	120	125	
gat tct tta gct gca gga gtg gct gct ttg tat tct tat gag agt caa			432
Asp Ser Leu Ala Ala Gly Val Ala Leu Tyr Ser Tyr Glu Ser Gln			

130

135

140

att cca cgt atc gct aga gag aaa att cgt gga ttg act gag tac ttt 480
 Ile Pro Arg Ile Ala Arg Glu Lys Ile Arg Gly Leu Thr Glu Tyr Phe
 145 150 155 160

gga ttt tcc aat cct gaa gac tat gca tat ttc aca gaa cat gaa gaa 528
 Gly Phe Ser Asn Pro Glu Asp Tyr Ala Tyr Phe Thr Glu His Glu Glu
 165 170 175

gcg gat gtg cg^g cat gct aga gaa aaa gc^g ctc att gag atg ctt 576
 Ala Asp Val Arg His Ala Arg Glu Glu Lys Ala Leu Ile Glu Met Leu
 180 185 190

ctc aaa gat gac gct gat aaa gtg tta gag gca tcg cag gaa gta acg 624
 Leu Lys Asp Asp Ala Asp Lys Val Leu Glu Ala Ser Gln Glu Val Thr
 195 200 205

caa tct ttg tat ggc ttt tta gat tct ttt ttg gat cca cga act tgt 672
 Gln Ser Leu Tyr Gly Phe Leu Asp Ser Phe Leu Asp Pro Arg Thr Cys
 210 215 220

tgt agt tgt cat caa tct tat taa 696
 Cys Ser Cys His Gln Ser Tyr
 225 230

<210> 20
 <211> 231
 <212> PRT
 <213> Chlamydia trachomatis

<400> 20
 Met Met Glu Val Phe Met Asn Phe Leu Asp Gln Leu Asp Leu Ile Ile
 1 5 10 15
 Gln Asn Lys His Met Leu Glu His Thr Phe Tyr Val Lys Trp Ser Lys
 20 25 30
 Gly Glu Leu Thr Lys Glu Gln Leu Gln Ala Tyr Ala Lys Asp Tyr Tyr
 35 40 45
 Leu His Ile Lys Ala Phe Pro Lys Tyr Leu Ser Ala Ile His Ser Arg
 50 55 60
 Cys Asp Asp Leu Glu Ala Arg Lys Leu Leu Asp Asn Leu Met Asp
 65 70 75 80
 Glu Glu Asn Gly Tyr Pro Asn His Ile Asp Leu Trp Lys Gln Phe Val
 85 90 95
 Phe Ala Leu Gly Val Thr Pro Glu Glu Leu Glu Ala His Glu Pro Ser
 100 105 110
 Glu Ala Ala Lys Ala Lys Val Ala Thr Phe Met Arg Trp Cys Thr Gly
 115 120 125
 Asp Ser Leu Ala Ala Gly Val Ala Ala Leu Tyr Ser Tyr Glu Ser Gln
 130 135 140
 Ile Pro Arg Ile Ala Arg Glu Lys Ile Arg Gly Leu Thr Glu Tyr Phe
 145 150 155 160
 Gly Phe Ser Asn Pro Glu Asp Tyr Ala Tyr Phe Thr Glu His Glu Glu
 165 170 175

Ala	Asp	Val	Arg	His	Ala	Arg	Glu	Glu	Lys	Ala	Leu	Ile	Glu	Met	Leu
							180				185				190
Leu	Lys	Asp	Asp	Ala	Asp	Lys	Val	Leu	Glu	Ala	Ser	Gln	Glu	Val	Thr
							195			200				205	
Gln	Ser	Leu	Tyr	Gly	Phe	Leu	Asp	Ser	Phe	Leu	Asp	Pro	Arg	Thr	Cys
							210			215				220	
Cys	Ser	Cys	His	Gln	Ser	Tyr									
							225			230					

<210> 21
<211> 687
<212> DNA
<213> *Mus musculus*

<220>
<221> CDS
<222> (1) ... (684)

<400> 21
atg ctt tat aac gtc agc aaa ggt gtg gtc tat tca gat aca gcc ctg 48
Met Leu Tyr Asn Val Ser Lys Gly Val Val Tyr Ser Asp Thr Ala Leu
1 5 10 15

cag ggg cag gac ggg gac agg gaa gga atg tgg gta gga gct ggg gga 96
 Gln Gly Gln Asp Gly Asp Arg Glu Gly Met Trp Val Gly Ala Gly Gly
 20 25 30

```

gcc cta gcc ccc aat acc tcc tcc cta ttt ccc cct gag cct cca ggg 144
Ala Leu Ala Pro Asn Thr Ser Ser Leu Phe Pro Pro Glu Pro Pro Gly
35 40 45

```

```
gcc tcg agc aac atc att cct gtc tac tgt gct ctc cta gct aca gtg      192
Ala Ser Ser Asn Ile Ile Pro Val Tyr Cys Ala Leu Leu Ala Thr Val
      50           55           60
```

```

atc ctt ggt ctg ctg gcc tat gtg gcc ttc aaa tgc tgg cgc tca cat 240
Ile Leu Gly Leu Leu Ala Tyr Val Ala Phe Lys Cys Trp Arg Ser His
   65           70           75           80

```

aag caa agg caa cag ttg gct aaa gct cg^g act gta gag cta ggg gac 288
 Lys Gln Arg Gln Gln Leu Ala Lys Ala Arg Thr Val Glu Leu Gly Asp
 85 90 95

```

cct gac agg gac cag agg cgt ggt gac agc aac gtc ttc gtg gac tct 336
Pro Asp Arg Asp Gln Arg Arg Gly Asp Ser Asn Val Phe Val Asp Ser
          100          105          110

```

```

cct cct agt ctg gag ccc tgt att ccc agc cag gga cca cac ccg gac 384
Pro Pro Ser Leu Glu Pro Cys Ile Pro Ser Gln Gly Pro His Pro Asp
           115           120           125

```

ctt ggc tgc cag ctt tac ctg cat att cca cag cag cag cag gag gaa 432
 Leu Gly Cys Gln Leu Tyr Leu His Ile Pro Gln Gln Gln Gln Glu Glu
 130 135 140

gtc cag cgg ctc ctg atg atg ggt gag cca gcc aag ggc tgg cag gag 480
Val Gln Arg Leu Leu Met Met Gly Glu Pro Ala Lys Gly Trp Gln Glu
145 150 155 160

ctg gca ggc cac ctc ggc tac caa gct gag gct gtg gaa acc atg gcc 528
Leu Ala Gly His Leu Gly Tyr Gln Ala Glu Ala Val Glu Thr Met Ala
165 170 175

tgt gac caa atg cca gcc tat acc ctg cta agg aac tgg gct gcc caa 576
Cys Asp Gln Met Pro Ala Tyr Thr Leu Leu Arg Asn Trp Ala Ala Gln
180 185 190

gaa ggc aat aga gct acc ctc aga gtg ctg gag gat gct ctg gct gcc 624
Glu Gly Asn Arg Ala Thr Leu Arg Val Leu Glu Asp Ala Leu Ala Ala
195 200 205

ata ggc cga gaa gat gtg gtc cag gtt ttg agc tcg cca gct gag agc 672
Ile Gly Arg Glu Asp Val Val Gln Val Leu Ser Ser Pro Ala Glu Ser
210 215 220

tcc tcg gtg gtg tga 687
Ser Ser Val Val
225

<210> 22
<211> 228
<212> PRT
<213> Mus musculus

<400> 22
Met Leu Tyr Asn Val Ser Lys Gly Val Val Tyr Ser Asp Thr Ala Leu
1 5 10 15
Gln Gly Gln Asp Gly Asp Arg Glu Gly Met Trp Val Gly Ala Gly Gly
20 25 30
Ala Leu Ala Pro Asn Thr Ser Ser Leu Phe Pro Pro Glu Pro Pro Gly
35 40 45
Ala Ser Ser Asn Ile Ile Pro Val Tyr Cys Ala Leu Ala Thr Val
50 55 60
Ile Leu Gly Leu Leu Ala Tyr Val Ala Phe Lys Cys Trp Arg Ser His
65 70 75 80
Lys Gln Arg Gln Gln Leu Ala Lys Ala Arg Thr Val Glu Leu Gly Asp
85 90 95
Pro Asp Arg Asp Gln Arg Arg Gly Asp Ser Asn Val Phe Val Asp Ser
100 105 110
Pro Pro Ser Leu Glu Pro Cys Ile Pro Ser Gln Gly Pro His Pro Asp
115 120 125
Leu Gly Cys Gln Leu Tyr Leu His Ile Pro Gln Gln Gln Glu Glu
130 135 140
Val Gln Arg Leu Leu Met Met Gly Glu Pro Ala Lys Gly Trp Gln Glu
145 150 155 160
Leu Ala Gly His Leu Gly Tyr Gln Ala Glu Ala Val Glu Thr Met Ala
165 170 175
Cys Asp Gln Met Pro Ala Tyr Thr Leu Leu Arg Asn Trp Ala Ala Gln

180	185	190													
Glu	Gly	Asn	Arg	Ala	Thr	Leu	Arg	Val	Leu	Glu	Asp	Ala	Leu	Ala	Ala
195								200				205			
Ile	Gly	Arg	Glu	Asp	Val	Val	Gln	Val	Leu	Ser	Ser	Pro	Ala	Glu	Ser
210								215				220			
Ser	Ser	Val	Val												
225															

<210> 23
<211> 696
<212> DNA
<213> Chlamydia trachomatis

<220>
<221> CDS
<222> (1)...(693)

<400> 23															
atg	atg	gag	gtg	ttt	atg	aat	ttt	tta	gat	cag	tta	gat	tta	att	att
Met	Met	Glu	Val	Phe	Met	Asn	Phe	Leu	Asp	Gln	Leu	Asp	Leu	Ile	Ile
1		5						10						15	
caa	aat	aag	cat	atg	cta	gaa	cac	aca	ttt	tat	gtg	aaa	tgg	tcg	aag
Gln	Asn	Lys	His	Met	Leu	Glu	His	Thr	Phe	Tyr	Val	Lys	Trp	Ser	Lys
20		25										30			
ggg	gag	ctt	act	aaa	gag	caa	tta	cag	gcg	tat	gcc	aaa	gac	tat	tat
Gly	Glu	Leu	Thr	Lys	Glu	Gln	Leu	Gln	Ala	Tyr	Ala	Lys	Asp	Tyr	Tyr
35		40										45			
tta	cat	atc	aaa	gcc	ttt	cct	aaa	tat	tta	tct	gcg	att	cat	agt	cgt
Leu	His	Ile	Lys	Ala	Phe	Pro	Lys	Tyr	Leu	Ser	Ala	Ile	His	Ser	Arg
50		55										60			
tgc	gat	gat	tta	gag	gcg	cgt	aag	tta	ttg	tta	gat	aac	ttg	atg	gat
Cys	Asp	Asp	Leu	Glu	Ala	Arg	Lys	Leu	Leu	Leu	Asp	Asn	Leu	Met	Asp
65		70										75		80	
gaa	gag	aac	ggt	tac	cct	aat	cat	att	gat	ttg	tgg	aag	cag	ttt	gtg
Glu	Glu	Asn	Gly	Tyr	Pro	Asn	His	Ile	Asp	Leu	Trp	Lys	Gln	Phe	Val
85		90										95			
ttt	gct	cta	gga	gtt	act	cca	gaa	gag	tta	gag	gct	cat	gag	cct	agt
Phe	Ala	Leu	Gly	Val	Thr	Pro	Glu	Glu	Leu	Glu	Ala	His	Glu	Pro	Ser
100		105										110			
gaa	gca	gca	aaa	gcg	aaa	gta	gct	act	ttc	atg	cgg	tgg	tgt	aca	gga
Glu	Ala	Ala	Lys	Ala	Lys	Val	Ala	Thr	Phe	Met	Arg	Trp	Cys	Thr	Gly
115		120										125			
gat	tct	tta	gct	gca	gga	gtg	gct	gct	ttg	tat	tct	tat	gag	agt	caa
Asp	Ser	Leu	Ala	Ala	Gly	Val	Ala	Ala	Leu	Tyr	Ser	Tyr	Glu	Ser	Gln
130		135										140			

att cca cgt atc gct aga gag aaa att cgt gga ttg act gag tac ttt 480
Ile Pro Arg Ile Ala Arg Glu Lys Ile Arg Gly Leu Thr Glu Tyr Phe
145 150 155 160

gga ttt tcc aat cct gaa gac tat gca tat ttc aca gaa cat gaa gaa 528
Gly Phe Ser Asn Pro Glu Asp Tyr Ala Tyr Phe Thr Glu His Glu Glu
165 170 175

gcg gat gtg cggt cat gct aga gaa aaa gcg ctc att gag atg ctt 576
Ala Asp Val Arg His Ala Arg Glu Glu Lys Ala Leu Ile Glu Met Leu
180 185 190

ctc aaa gat gac gct gat aaa gtg tta gag gca tcg caa gaa gta acg 624
Leu Lys Asp Asp Ala Asp Lys Val Leu Glu Ala Ser Gln Glu Val Thr
195 200 205

caa tct ttg tat ggc ttt tta gat tct ttt ttg gat cca gga act tgt 672
Gln Ser Leu Tyr Gly Phe Leu Asp Ser Phe Leu Asp Pro Gly Thr Cys
210 215 220

tgt agt tgt cat caa tct tat taa 696
Cys Ser Cys His Gln Ser Tyr
225 230

<210> 24
<211> 231
<212> PRT
<213> Chlamydia trachomatis

<400> 24
Met Met Glu Val Phe Met Asn Phe Leu Asp Gln Leu Asp Leu Ile Ile
1 5 10 15
Gln Asn Lys His Met Leu Glu His Thr Phe Tyr Val Lys Trp Ser Lys
20 25 30
Gly Glu Leu Thr Lys Glu Gln Leu Gln Ala Tyr Ala Lys Asp Tyr Tyr
35 40 45
Leu His Ile Lys Ala Phe Pro Lys Tyr Leu Ser Ala Ile His Ser Arg
50 55 60
Cys Asp Asp Leu Glu Ala Arg Lys Leu Leu Asp Asn Leu Met Asp
65 70 75 80
Glu Glu Asn Gly Tyr Pro Asn His Ile Asp Leu Trp Lys Gln Phe Val
85 90 95
Phe Ala Leu Gly Val Thr Pro Glu Glu Leu Glu Ala His Glu Pro Ser
100 105 110
Glu Ala Ala Lys Ala Lys Val Ala Thr Phe Met Arg Trp Cys Thr Gly
115 120 125
Asp Ser Leu Ala Ala Gly Val Ala Ala Leu Tyr Ser Tyr Glu Ser Gln
130 135 140
Ile Pro Arg Ile Ala Arg Glu Lys Ile Arg Gly Leu Thr Glu Tyr Phe
145 150 155 160
Gly Phe Ser Asn Pro Glu Asp Tyr Ala Tyr Phe Thr Glu His Glu Glu
165 170 175
Ala Asp Val Arg His Ala Arg Glu Glu Lys Ala Leu Ile Glu Met Leu
180 185 190

Leu Lys Asp Asp Ala Asp Lys Val Leu Glu Ala Ser Gln Glu Val Thr
 195 200 205
 Gln Ser Leu Tyr Gly Phe Leu Asp Ser Phe Leu Asp Pro Gly Thr Cys
 210 215 220
 Cys Ser Cys His Gln Ser Tyr
 225 230

<210> 25
 <211> 211
 <212> DNA
 <213> Homo sapien

<220>
 <221> CDS
 <222> (1) ... (177)

<400> 25
 atg aac aaa ccc ata aca cca tca aca tat gtg cgc tgc ctc aat gtt 48
 Met Asn Lys Pro Ile Thr Pro Ser Thr Tyr Val Arg Cys Leu Asn Val
 1 5 10 15

gga cta att agg aag ctg tca gat ttt att gat cct caa gaa gga tgg 96
 Gly Leu Ile Arg Lys Leu Ser Asp Phe Ile Asp Pro Gln Glu Gly Trp
 20 25 30

aag aag tta gct gta gct att aaa aaa cca tct ggt gat gat aga tac 144
 Lys Lys Leu Ala Val Ala Ile Lys Lys Pro Ser Gly Asp Asp Arg Tyr
 35 40 45

aat cag ttt cac ata aga tgc tgt tcc caa aac taatacacta ccttctaaag 197
 Asn Gln Phe His Ile Arg Cys Cys Ser Gln Asn
 50 55

aagctataac agtt 211

<210> 26
 <211> 59
 <212> PRT
 <213> Homo sapien

<400> 26
 Met Asn Lys Pro Ile Thr Pro Ser Thr Tyr Val Arg Cys Leu Asn Val
 1 5 10 15
 Gly Leu Ile Arg Lys Leu Ser Asp Phe Ile Asp Pro Gln Glu Gly Trp
 20 25 30
 Lys Lys Leu Ala Val Ala Ile Lys Lys Pro Ser Gly Asp Asp Arg Tyr
 35 40 45
 Asn Gln Phe His Ile Arg Cys Cys Ser Gln Asn
 50 55

<210> 27
 <211> 2817
 <212> DNA

<213> Homo sapien

<220>

<221> CDS

<222> (50) ... (1429)

<400> 27

gttcttctgt cgccggcttc agcagccgc gccccggcag gaatagaag atg aac aaa 58
Met Asn Lys
1

ccc ata aca cca tca aca tat gtg cgc tgc ctc aat gtt gga cta att 106
Pro Ile Thr Pro Ser Thr Tyr Val Arg Cys Leu Asn Val Gly Leu Ile
5 10 15

agg aag ctg tca gat ttt att gat cct caa gaa gga tgg aag aag tta 154
Arg Lys Leu Ser Asp Phe Ile Asp Pro Gln Glu Gly Trp Lys Lys Leu
20 25 30 35

gct gta gct att aaa aaa cca tct ggt gat gat aga tac aat cag ttt 202
Ala Val Ala Ile Lys Lys Pro Ser Gly Asp Asp Arg Tyr Asn Gln Phe
40 45 50

cac ata agg aga ttt gaa gca tta ctt caa act gga aaa agt ccc act 250
His Ile Arg Arg Phe Glu Ala Leu Leu Gln Thr Gly Lys Ser Pro Thr
55 60 65

tct gaa tta ctg ttt gac tgg ggc acc aca aat tgc aca gtt ggt gat 298
Ser Glu Leu Leu Phe Asp Trp Gly Thr Thr Asn Cys Thr Val Gly Asp
70 75 80

ctt gtg gat ctt ttg atc caa aat gaa ttt ttt gct cct gcg agt ctt 346
Leu Val Asp Leu Leu Ile Gln Asn Glu Phe Phe Ala Pro Ala Ser Leu
85 90 95

ttg ctc cca gat gct gtt ccc aaa act gct aat aca cta cct tct aaa 394
Leu Leu Pro Asp Ala Val Pro Lys Thr Ala Asn Thr Leu Pro Ser Lys
100 105 110 115

gaa gct ata aca gtt cag caa aaa cag atg cct ttc tgt gac aaa gac 442
Glu Ala Ile Thr Val Gln Gln Lys Gln Met Pro Phe Cys Asp Lys Asp
120 125 130

agg aca ttg atg aca cct gtg cag aat ctt gaa caa agc tat atg cca 490
Arg Thr Leu Met Thr Pro Val Gln Asn Leu Glu Gln Ser Tyr Met Pro
135 140 145

cct gac tcc tca agt cca gaa aat aaa agt tta gaa gtt agt gat aca 538
Pro Asp Ser Ser Ser Pro Glu Asn Lys Ser Leu Glu Val Ser Asp Thr
150 155 160

cgt ttt cac agt ttt tca ttt tat gaa ttg aag aat gtc aca aat aac 586
Arg Phe His Ser Phe Ser Phe Tyr Glu Leu Lys Asn Val Thr Asn Asn
165 170 175

ttt gat gaa cga ccc att tct gtt ggt aat aaa atg gga gag gga Phe Asp Glu Arg Pro Ile Ser Val Gly Gly Asn Lys Met Gly Glu Gly 180	185	190	195	634
gga ttt gga gtt gta tat aaa ggc tac gta aat aac aca act gtg gca Gly Phe Gly Val Val Tyr Lys Gly Tyr Val Asn Asn Thr Thr Val Ala 200	205	210		682
gtg aag aag ctt gca gca atg gtt gac att act act gaa gaa ctg aaa Val Lys Lys Leu Ala Ala Met Val Asp Ile Thr Thr Glu Glu Leu Lys 215	220	225		730
cag cag ttt gat caa gaa ata aaa gta atg gca aag tgt caa cat gaa Gln Gln Phe Asp Gln Glu Ile Lys Val Met Ala Lys Cys Gln His Glu 230	235	240		778
aac tta gta gaa cta ctt ggt ttc tca agt gat gga gat gac ctc tgc Asn Leu Val Glu Leu Leu Gly Phe Ser Ser Asp Gly Asp Asp Leu Cys 245	250	255		826
tta gta tat gtt tac atg cct aat ggt tca ttg cta gac aga ctc tct Leu Val Tyr Val Tyr Met Pro Asn Gly Ser Leu Leu Asp Arg Leu Ser 260	265	270	275	874
tgc ttg gat ggt act cca cca ctt tct tgg cac atg aga tgc aag att Cys Leu Asp Gly Thr Pro Pro Leu Ser Trp His Met Arg Cys Lys Ile 280	285	290		922
gct cag ggt gca gct aat ggc atc aat ttt cta cat gaa aat cat cat Ala Gln Gly Ala Ala Asn Gly Ile Asn Phe Leu His Glu Asn His His 295	300	305		970
att cat aga gat att aaa agt gca aat atc tta ctg gat gaa gct ttt Ile His Arg Asp Ile Lys Ser Ala Asn Ile Leu Leu Asp Glu Ala Phe 310	315	320		1018
act gct aaa ata tct gac ttt ggc ctt gca cgg gct tct gag aag ttt Thr Ala Lys Ile Ser Asp Phe Gly Leu Ala Arg Ala Ser Glu Lys Phe 325	330	335		1066
gcc cag aca gtc atg act agc aga att gtg gga aca aca gct tat atg Ala Gln Thr Val Met Thr Ser Arg Ile Val Gly Thr Thr Ala Tyr Met 340	345	350	355	1114
gca cca gaa gct ttg cgt gga gaa ata aca ccc aaa tct gat att tac Ala Pro Glu Ala Leu Arg Gly Glu Ile Thr Pro Lys Ser Asp Ile Tyr 360	365	370		1162
agc ttt ggt gtg gtt tta cta gaa ata ata act gga ctt cca gct gtg Ser Phe Gly Val Val Leu Leu Glu Ile Ile Thr Gly Leu Pro Ala Val 375	380	385		1210
gat gaa cac cgt gaa cct cag tta ttg cta gat att aaa gaa gaa att Asp Glu His Arg Glu Pro Gln Leu Leu Leu Asp Ile Lys Glu Glu Ile 390	395	400		1258

gaa gat gaa gaa aag aca att gaa gat tat att gat aaa aag atg aat 1306
 Glu Asp Glu Glu Lys Thr Ile Glu Asp Tyr Ile Asp Lys Lys Met Asn
 405 410 415

gat gct gat tcc act tca gtt gaa gct atg tac tct ggt gct agc caa 1354
 Asp Ala Asp Ser Thr Ser Val Glu Ala Met Tyr Ser Gly Ala Ser Gln
 420 425 430 435

tgt cggtt cat gaa aag aaa aat aag agc cca gac att aag aag gtt cac 1402
 Cys Arg His Glu Lys Lys Asn Ser Pro Asp Ile Lys Lys Val His
 440 445 450

cag ctg ctg caa gag atg aca gct tct taaaacttta ttgaaaaaga 1449
 Gln Leu Leu Gln Glu Met Thr Ala Ser
 455 460

ctcttgactt tttatataca cctatctcaa ccatttttt aactgatttt tttcctaaat 1509
 attcttcctt acctttaaca aggcataggc tggtgcagga cagtggttat taaagcatgg 1569
 gttgaacttc caaaatataa aaatagagcc accatatacaa cacttagccc taccattag 1629
 tatcaccccc agttcttaca gtaatccctg agaaatctcc ttcaagcattc accaaacaca 1689
 gtttggaaat tacagggta gcaaaaagag cctgggtgt atgttagggtg gaaacactct 1749
 gatctgaagc ccagctgact ccactactaa tttgctgtaa agcttggac atacacttag 1809
 ctgctgtgag ccactaataa cattgggcta atatctgt tgcttctctg acaggttagtc 1869
 atgaaaatca aatgatgca aatataatac agcactttgt aaattgtaaa atgatacaaa 1929
 atttaaagtt tatagagcca gttacaaaat cctattagtc atatatttat agattgtgtt 1989
 cacagcaatc atttaaccac aaataaaaata tcccttgatg atactgccc atatgatatgt 2049
 ccattattag attatgttac atgacaaaatg tgaaggatt tggcagatgc agttaagggtt 2109
 cctaaacaac tcactttgag actgttggaa gggcctgacc taatccaagt gaacccttg 2169
 caagaagaat tctccttgc agccttgcag aagtatgtg gagggccaca ttggctaaaa 2229
 cctaaagggtg gcctctagga gatgagaccc accttccagt tgtagcaag caggaaaaaa 2289
 aaattgggac ctcagttgca accacaagga actgaattct gccaaaaatc tgagtcaagct 2349
 tagaagagta ctccaagctt cagatgataa ccacagcctg ggctgacacc tggatttcag 2409
 ctggcatga tcctcagtt gagaatctat ctgttctgtg ctggacttct aatataataga 2469
 actgtgagat aatgggtcac attggctgga tgggtggct catacctgta aatcccagca 2529
 ctggggagg ccgaggcagg cagatcacct gaggtcaaga gttcaagacc ggcctggcca 2589
 acatggtaa accccgtctc tactaaaaat acaaaaaatgacgagcgtg gtggtgacca 2649
 cctgttagtcc cagctgcttggaggctgag gcaggagact agctggaaacc agggaggtag 2709
 aggttgcagt gagctgagat cgtgccactg cactccagcc tgggtgacag agtgagactc 2769
 catcataaat aaataaataa ataaatgggt cccattaagc ctttaaaa 2817

<210> 28
 <211> 460
 <212> PRT
 <213> Homo sapien

<400> 28

Met Asn Lys Pro Ile Thr Pro Ser Thr Tyr Val Arg Cys Leu Asn Val
 1 5 10 15
 Gly Leu Ile Arg Lys Leu Ser Asp Phe Ile Asp Pro Gln Glu Gly Trp
 20 25 30
 Lys Lys Leu Ala Val Ala Ile Lys Lys Pro Ser Gly Asp Asp Arg Tyr
 35 40 45
 Asn Gln Phe His Ile Arg Arg Phe Glu Ala Leu Leu Gln Thr Gly Lys
 50 55 60

Ser Pro Thr Ser Glu Leu Leu Phe Asp Trp Gly Thr Thr Asn Cys Thr
 65 70 75 80
 Val Gly Asp Leu Val Asp Leu Leu Ile Gln Asn Glu Phe Phe Ala Pro
 85 90 95
 Ala Ser Leu Leu Leu Pro Asp Ala Val Pro Lys Thr Ala Asn Thr Leu
 100 105 110
 Pro Ser Lys Glu Ala Ile Thr Val Gln Gln Lys Gln Met Pro Phe Cys
 115 120 125
 Asp Lys Asp Arg Thr Leu Met Thr Pro Val Gln Asn Leu Glu Gln Ser
 130 135 140
 Tyr Met Pro Pro Asp Ser Ser Pro Glu Asn Lys Ser Leu Glu Val
 145 150 155 160
 Ser Asp Thr Arg Phe His Ser Phe Ser Phe Tyr Glu Leu Lys Asn Val
 165 170 175
 Thr Asn Asn Phe Asp Glu Arg Pro Ile Ser Val Gly Gly Asn Lys Met
 180 185 190
 Gly Glu Gly Gly Phe Gly Val Val Tyr Lys Gly Tyr Val Asn Asn Thr
 195 200 205
 Thr Val Ala Val Lys Lys Leu Ala Ala Met Val Asp Ile Thr Thr Glu
 210 215 220
 Glu Leu Lys Gln Gln Phe Asp Gln Glu Ile Lys Val Met Ala Lys Cys
 225 230 235 240
 Gln His Glu Asn Leu Val Glu Leu Leu Gly Phe Ser Ser Asp Gly Asp
 245 250 255
 Asp Leu Cys Leu Val Tyr Val Tyr Met Pro Asn Gly Ser Leu Leu Asp
 260 265 270
 Arg Leu Ser Cys Leu Asp Gly Thr Pro Pro Leu Ser Trp His Met Arg
 275 280 285
 Cys Lys Ile Ala Gln Gly Ala Ala Asn Gly Ile Asn Phe Leu His Glu
 290 295 300
 Asn His His Ile His Arg Asp Ile Lys Ser Ala Asn Ile Leu Leu Asp
 305 310 315 320
 Glu Ala Phe Thr Ala Lys Ile Ser Asp Phe Gly Leu Ala Arg Ala Ser
 325 330 335
 Glu Lys Phe Ala Gln Thr Val Met Thr Ser Arg Ile Val Gly Thr Thr
 340 345 350
 Ala Tyr Met Ala Pro Glu Ala Leu Arg Gly Glu Ile Thr Pro Lys Ser
 355 360 365
 Asp Ile Tyr Ser Phe Gly Val Val Leu Leu Glu Ile Ile Thr Gly Leu
 370 375 380
 Pro Ala Val Asp Glu His Arg Glu Pro Gln Leu Leu Leu Asp Ile Lys
 385 390 395 400
 Glu Glu Ile Glu Asp Glu Glu Lys Thr Ile Glu Asp Tyr Ile Asp Lys
 405 410 415
 Lys Met Asn Asp Ala Asp Ser Thr Ser Val Glu Ala Met Tyr Ser Gly
 420 425 430
 Ala Ser Gln Cys Arg His Glu Lys Lys Asn Lys Ser Pro Asp Ile Lys
 435 440 445
 Lys Val His Gln Leu Leu Gln Glu Met Thr Ala Ser
 450 455 460

<210> 29

<211> 142

<212> PRT

<213> Homo sapien

<400> 29

Lys Leu Lys Gly Glu Pro Gly Trp Val Thr Ile His Gly Met Ala Gly
1 5 10 15
Cys Gly Lys Ser Val Leu Ala Ala Glu Ala Val Arg Asp His Ser Leu
20 25 30
Leu Glu Gly Cys Phe Pro Gly Gly Val His Trp Val Ser Val Gly Lys
35 40 45
Gln Asp Lys Ser Gly Leu Leu Met Lys Leu Gln Asn Leu Cys Thr Arg
50 55 60
Leu Asp Gln Asp Glu Ser Phe Ser Gln Arg Leu Pro Leu Asn Ile Glu
65 70 75 80
Glu Ala Lys Asp Arg Leu Arg Ile Leu Met Leu Arg Lys His Pro Arg
85 90 95
Ser Leu Leu Ile Leu Asp Asp Val Trp Asp Ser Trp Val Leu Lys Ala
100 105 110
Phe Asp Ser Gln Cys Gln Ile Leu Leu Thr Thr Arg Asp Lys Ser Val
115 120 125
Thr Asp Ser Val Met Gly Pro Lys Tyr Val Val Pro Val Glu
130 135 140

<210> 30

<211> 145

<212> PRT

<213> C. elegans

<400> 30

Glu Met Cys Asp Leu Asp Ser Phe Phe Leu Phe Leu His Gly Arg Ala
1 5 10 15
Gly Ser Gly Lys Ser Val Ile Ala Ser Gln Ala Leu Ser Lys Ser Asp
20 25 30
Gln Leu Ile Gly Ile Asn Tyr Asp Ser Ile Val Trp Leu Lys Asp Ser
35 40 45
Gly Thr Ala Pro Lys Ser Thr Phe Asp Leu Phe Thr Asp Ile Leu Leu
50 55 60
Met Leu Lys Ser Glu Asp Asp Leu Leu Asn Phe Pro Ser Val Glu His
65 70 75 80
Val Thr Ser Val Val Leu Lys Arg Met Ile Cys Asn Ala Leu Ile Asp
85 90 95
Arg Pro Asn Thr Leu Phe Val Phe Asp Asp Val Val Gln Glu Glu Thr
100 105 110
Ile Arg Trp Ala Gln Glu Leu Arg Leu Arg Cys Leu Val Thr Thr Arg
115 120 125
Asp Val Glu Ile Ser Asn Ala Ala Ser Gln Thr Cys Glu Phe Ile Glu
130 135 140
Val
145

<210> 31

<211> 75

<212> PRT

<213> Homo sapien

<400> 31

Met Asp Phe Ser Arg Asn Leu Tyr Asp Ile Gly Glu Gln Leu Asp Ser
1 5 10 15
Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
20 25 30
Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
35 40 45
Gln Glu Lys Arg Met Leu Glu Glu Ser Asn Leu Ser Phe Leu Lys Glu
50 55 60
Leu Leu Phe Arg Ile Asn Arg Leu Asp Leu Leu
65 70 75

<210> 32

<211> 76

<212> PRT

<213> Homo sapien

<400> 32

His Leu Leu Ile Arg Val Met Leu Tyr Gln Ile Ser Glu Glu Val Ser
1 5 10 15
Arg Ser Glu Leu Arg Ser Phe Lys Phe Leu Leu Gln Glu Glu Ile Ser
20 25 30
Lys Cys Lys Leu Asp Asp Asp Met Asn Leu Leu Asp Ile Phe Ile Glu
35 40 45
Met Glu Lys Arg Val Ile Leu Gly Glu Gly Lys Leu Asp Ile Leu Lys
50 55 60
Arg Val Cys Ala Gln Ile Asn Lys Ser Leu Leu Lys
65 70 75

<210> 33

<211> 77

<212> PRT

<213> Homo sapien

<400> 33

Lys Val Ser Phe Arg Glu Lys Leu Leu Ile Ile Asp Ser Asn Leu Gly
1 5 10 15
Val Gln Asp Val Glu Asn Leu Lys Phe Leu Cys Ile Gly Leu Val Pro
20 25 30
Asn Lys Lys Leu Glu Lys Ser Ser Ala Ser Asp Val Phe Glu His
35 40 45
Leu Leu Ala Glu Asp Leu Leu Ser Glu Glu Asp Pro Phe Phe Leu Ala
50 55 60
Glu Leu Leu Tyr Ile Ile Arg Gln Lys Lys Leu Leu Gln
65 70 75

<210> 34

<211> 72

<212> PRT

<213> Homo sapien

<400> 34

Val Ser Leu Phe Arg Asn Leu Leu Tyr Glu Leu Ser Glu Gly Ile Asp
1 5 10 15
Ser Glu Asn Leu Lys Asp Met Ile Phe Leu Leu Lys Asp Ser Leu Pro
20 25 30
Lys Thr Glu Met Thr Ser Leu Ser Phe Leu Ala Phe Leu Glu Lys Gln
35 40 45
Gly Lys Ile Asp Glu Asp Asn Leu Thr Cys Leu Glu Asp Leu Cys Lys
50 55 60
Thr Val Val Pro Lys Leu Leu Arg
65 70

<210> 35

<211> 77

<212> PRT

<213> Homo sapien

<400> 35

Met Asp Pro Phe Leu Val Leu Leu His Ser Val Ser Ser Ser Leu Ser
1 5 10 15
Ser Ser Glu Leu Thr Glu Leu Lys Phe Leu Cys Leu Gly Arg Val Gly
20 25 30
Lys Arg Lys Leu Glu Arg Val Gln Ser Gly Leu Asp Leu Phe Ser Met
35 40 45
Leu Leu Glu Gln Asn Asp Leu Glu Pro Gly His Thr Glu Leu Leu Arg
50 55 60
Glu Leu Leu Ala Ser Leu Arg Arg His Asp Leu Leu Arg
65 70 75

<210> 36

<211> 99

<212> PRT

<213> Homo sapien

<400> 36

Trp Pro Glu Glu His Gly Glu Gln Glu His Gly Leu Tyr Ser Leu His
1 5 10 15
Arg Met Phe Asp Ile Val Gly Thr His Leu Thr His Arg Asp Val Arg
20 25 30
Val Leu Ser Phe Leu Phe Val Asp Val Ile Asp His Glu Arg Gly Leu
35 40 45
Ile Arg Asn Gly Arg Asp Phe Leu Leu Ala Leu Glu Arg Gln Gly Arg
50 55 60
Cys Asp Glu Ser Asn Phe Arg Gln Val Leu Gln Leu Leu Arg Ile Ile
65 70 75 80
Thr Arg His Asp Leu Leu Pro Tyr Val Thr Leu Lys Arg Arg Arg Ala
85 90 95
Val Cys Pro

<210> 37

<211> 99

<212> PRT

<213> Mus musculus

<400> 37

Trp Pro Glu Glu Arg Gly Glu Gln Glu His Gly Leu Tyr Ser Leu His
1 5 10 15
Arg Met Phe Asp Ile Val Gly Thr His Leu Thr His Arg Asp Val Arg
20 25 30
Val Leu Ser Phe Leu Phe Val Asp Val Ile Asp His Glu Arg Gly Leu
35 40 45
Ile Arg Asn Gly Arg Asp Phe Leu Leu Ala Leu Glu Arg Gln Gly Arg
50 55 60
Cys Asp Glu Ser Asn Phe Arg Gln Val Leu Gln Leu Leu Arg Ile Ile
65 70 75 80
Thr Arg His Asp Leu Leu Pro Tyr Val Thr Leu Lys Lys Arg Arg Ala
85 90 95
Val Cys Pro

<210> 38

<211> 146

<212> PRT

<213> Danio rerio

<400> 38

Trp Glu Glu Thr Glu Cys Leu Ser Tyr Tyr Glu Thr Leu Ser Leu His
1 5 10 15
Glu Ile Phe Glu Ile Val Gly Ser Gln Leu Thr Glu Thr Cys Gly Gly
20 25 30
Glu Val Ala Phe Leu Leu Asp Glu Thr Tyr Pro Gly Lys His Pro Leu
35 40 45
Asp Pro Glu Gly Trp Thr Glu Asp Leu Pro Pro Gly Pro Asp Gly Ser
50 55 60
Pro Gln Ala Asn Thr Pro Cys Pro Arg Leu Leu Lys Ser Trp Gln Arg
65 70 75 80
Met Gln Pro Gln Lys Glu Gly Cys Ser Ile Ala Ser Arg His Arg Pro
85 90 95
Lys Ser Gly Val Glu Leu Leu Leu Glu Leu Glu Arg Arg Gly Tyr Leu
100 105 110
Ser Asp Ala Asn Leu Arg Pro Leu Leu Gln Leu Leu Arg Ile Leu Thr
115 120 125
Arg His Asp Val Leu Pro Phe Val Ser Gln Lys Lys Arg Arg Thr Val
130 135 140
Ser Pro
145

<210> 39

<211> 82

<212> PRT

<213> Homo sapien

<400> 39

Met Asp Pro Phe Leu Val Leu Leu His Ser Val Ser Ser Ser Leu Ser

1 5 10 15
Ser Ser Glu Leu Thr Glu Leu Lys Tyr Leu Cys Leu Gly Arg Lys Arg
20 25 30
Lys Leu Glu Arg Val Gln Ser Gly Leu Asp Leu Phe Ser Met Leu Leu
35 40 45
Glu Gln Asn Asp Leu Glu Pro Gly His Thr Glu Leu Leu Arg Glu Leu
50 55 60
Leu Ala Ser Leu Arg Arg His Asp Leu Leu Arg Arg Val Asp Asp Phe
65 70 75 80
Glu Leu

<210> 40
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<400> 40
atgatgctga aaggaata

18

<210> 41
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<400> 41
agtccctcgac tcacgtgcaa ggatgatgct gaaaggaata

40

<210> 42
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 42
gcgaattcat gaacaaaaccc ataacaccat caaca

35

<210> 43
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 43

gcctcgagtt aagaagctgt catctttgc agcag	35
<210> 44	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthetic primer	
<400> 44	
atgatggagg tgttttag	18
<210> 45	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthetic primer	
<400> 45	
ataagattga tgacaactac	20
<210> 46	
<211> 16	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthetic primer	
<400> 46	
ctccggccgc gtctgg	16
<210> 47	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthetic primer	
<400> 47	
cgccccaggag tcatcgacgc c	21
<210> 48	
<211> 23	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthetic primer	
<400> 48	

CDS

ccgaggtggc ctgccagtc ctg	23
<210> 49	
<211> 28	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthetic primer	
<400> 49	
acacccggac cttgcctgcc agctttac	28
<210> 50	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthetic primer	
<400> 50	
atgccttata acgtcagc	18
<210> 51	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthetic primer	
<400> 51	
tcacaccacc gaggagctct c	21
<210> 52	
<211> 195	
<212> DNA	
<213> C. muridarum	
<220>	
<221> CDS	
<222> (1) ... (195)	
<400> 52	
gat tta tgg aaa caa ttt gtg ttt gct ctt gga gtg tct tca gaa gag	48
Asp Leu Trp Lys Gln Phe Val Phe Ala Leu Gly Val Ser Ser Glu Glu	
1 5 10 15	
cta gaa gct cat gaa ccc agt gaa gca gct aaa gct aag gtt gcg aca	96
Leu Glu Ala His Glu Pro Ser Glu Ala Ala Lys Ala Lys Val Ala Thr	
20 25 30	
ttt atg cgg tgg tgc aca ggg gat tct tta gca gca gga gta gcg gct	144
Phe Met Arg Trp Cys Thr Gly Asp Ser Leu Ala Ala Gly Val Ala Ala	

35

40

45

ttg tat tct tat gaa agt caa att cct tgc gta gct aaa gaa aaa att 192
Leu Tyr Ser Tyr Glu Ser Gln Ile Pro Cys Val Ala Lys Glu Lys Ile
50 55 60

cgt 195
Arg
65

<210> 53
<211> 65
<212> PRT
<213> C. muridarum

<400> 53
Asp Leu Trp Lys Gln Phe Val Phe Ala Leu Gly Val Ser Ser Glu Glu
1 5 10 15
Leu Glu Ala His Glu Pro Ser Glu Ala Ala Lys Ala Lys Val Ala Thr
20 25 30
Phe Met Arg Trp Cys Thr Gly Asp Ser Leu Ala Ala Gly Val Ala Ala
35 40 45
Leu Tyr Ser Tyr Glu Ser Gln Ile Pro Cys Val Ala Lys Glu Lys Ile
50 55 60

Arg
65

<210> 54
<211> 711
<212> DNA
<213> C. muridarum

<220>
<221> CDS
<222> (1)...(708)

<400> 54
atg gaa tca aga aaa gga ata aaa gag gtg agc atg aat ttt tta gat 48
Met Glu Ser Arg Lys Gly Ile Lys Glu Val Ser Met Asn Phe Leu Asp
1 5 10 15

cag cta gat gca att att caa aac aaa cat atg tta gaa cac cct ttt 96
Gln Leu Asp Ala Ile Ile Gln Asn Lys His Met Leu Glu His Pro Phe
20 25 30

tac atg aag tgg tca aaa gga gag ctg aca aaa gaa caa tta cag gca 144
Tyr Met Lys Trp Ser Lys Gly Glu Leu Thr Lys Glu Gln Leu Gln Ala
35 40 45

tac gca aaa gat tac tat ttg cat atc aaa gct ttt cca aaa tat tta 192
Tyr Ala Lys Asp Tyr Tyr Leu His Ile Lys Ala Phe Pro Lys Tyr Leu
50 55 60

tct gct att cat agc cgt tgt gat gat tta gaa gcc cgc aag tta tta	240
Ser Ala Ile His Ser Arg Cys Asp Asp Leu Glu Ala Arg Lys Leu Leu	
65 70 75 80	
tta gat aac tta atg gat gaa gag aat ggt tat cct aat cat att gat	288
Leu Asp Asn Leu Met Asp Glu Glu Asn Gly Tyr Pro Asn His Ile Asp	
85 90 95	
tta tgg aaa caa ttt gtg ttt gct ctt gga gtg tct tca gaa gag cta	336
Leu Trp Lys Gln Phe Val Phe Ala Leu Gly Val Ser Ser Glu Glu Leu	
100 105 110	
gaa gct cat gaa ccc agt gaa gca gct aaa gct aag gtt gcg aca ttt	384
Glu Ala His Glu Pro Ser Glu Ala Ala Lys Ala Lys Val Ala Thr Phe	
115 120 125	
atg cgg tgg tgc aca ggg gat tct tta gca gca gga gta gcg gct ttg	432
Met Arg Trp Cys Thr Gly Asp Ser Leu Ala Ala Gly Val Ala Ala Leu	
130 135 140	
tat tct tat gaa agt caa att cct tgc gta gct aaa gaa aaa att cgt	480
Tyr Ser Tyr Glu Ser Gln Ile Pro Cys Val Ala Lys Glu Lys Ile Arg	
145 150 155 160	
gga ttg att gag tac ttt ggc ttt tct aat cct gaa gat tat gct tat	528
Gly Leu Ile Glu Tyr Phe Gly Phe Ser Asn Pro Glu Asp Tyr Ala Tyr	
165 170 175	
ttc acg gag cat gaa gaa gct gat gtg cgt cat gct agg gaa gaa aag	576
Phe Thr Glu His Glu Ala Asp Val Arg His Ala Arg Glu Glu Lys	
180 185 190	
gcc tta att gag atg ttg tct aga gat gat agc gac aaa gtt tta gaa	624
Ala Leu Ile Glu Met Leu Ser Arg Asp Asp Ser Asp Lys Val Leu Glu	
195 200 205	
gct tcg cga gaa gtt aca caa tct tta tac ggc ttt ttg gat tca ttt	672
Ala Ser Arg Glu Val Thr Gln Ser Leu Tyr Gly Phe Leu Asp Ser Phe	
210 215 220	
tta gag cct gca aca tgt tgt cat tgt cac aaa gct taa	711
Leu Glu Pro Ala Thr Cys Cys His Cys His Lys Ala	
225 230 235	

<210> 55
 <211> 236
 <212> PRT
 <213> C. muridarum

<400> 55
 Met Glu Ser Arg Lys Gly Ile Lys Glu Val Ser Met Asn Phe Leu Asp
 1 5 10 15
 Gln Leu Asp Ala Ile Ile Gln Asn Lys His Met Leu Glu His Pro Phe
 20 25 30

Tyr Met Lys Trp Ser Lys Gly Glu Leu Thr Lys Glu Gln Leu Gln Ala
 35 40 45
 Tyr Ala Lys Asp Tyr Tyr Leu His Ile Lys Ala Phe Pro Lys Tyr Leu
 50 55 60
 Ser Ala Ile His Ser Arg Cys Asp Asp Leu Glu Ala Arg Lys Leu Leu
 65 70 75 80
 Leu Asp Asn Leu Met Asp Glu Glu Asn Gly Tyr Pro Asn His Ile Asp
 85 90 95
 Leu Trp Lys Gln Phe Val Phe Ala Leu Gly Val Ser Ser Glu Glu Leu
 100 105 110
 Glu Ala His Glu Pro Ser Glu Ala Ala Lys Ala Lys Val Ala Thr Phe
 115 120 125
 Met Arg Trp Cys Thr Gly Asp Ser Leu Ala Ala Gly Val Ala Ala Leu
 130 135 140
 Tyr Ser Tyr Glu Ser Gln Ile Pro Cys Val Ala Lys Glu Lys Ile Arg
 145 150 155 160
 Gly Leu Ile Glu Tyr Phe Gly Phe Ser Asn Pro Glu Asp Tyr Ala Tyr
 165 170 175
 Phe Thr Glu His Glu Glu Ala Asp Val Arg His Ala Arg Glu Glu Lys
 180 185 190
 Ala Leu Ile Glu Met Leu Ser Arg Asp Asp Ser Asp Lys Val Leu Glu
 195 200 205
 Ala Ser Arg Glu Val Thr Gln Ser Leu Tyr Gly Phe Leu Asp Ser Phe
 210 215 220
 Leu Glu Pro Ala Thr Cys Cys His Cys His Lys Ala
 225 230 235

<210> 56
 <211> 65
 <212> PRT
 <213> C. pneumoniae

<400> 56
 Asp Leu Trp Arg Gln Phe Ala Leu Ser Leu Gly Val Ser Glu Glu
 1 5 10 15
 Leu Ala Asn His Glu Phe Ser Gln Ala Ala Gln Asp Met Val Ala Thr
 20 25 30
 Phe Arg Arg Leu Cys Asp Met Pro Gln Leu Ala Val Gly Leu Gly Ala
 35 40 45
 Leu Tyr Thr Tyr Glu Ile Gln Ile Pro Gln Val Cys Val Glu Lys Ile
 50 55 60
 Arg
 65

<210> 57
 <211> 224
 <212> PRT
 <213> C. pneumoniae

<400> 57
 Met Thr Ser Trp Ile Glu Leu Leu Asp Lys Gln Ile Glu Asp Gln His
 1 5 10 15
 Met Leu Lys His Glu Phe Tyr Gln Arg Trp Ser Glu Gly Lys Leu Glu

20	25	30	
Lys Gln Gln Leu Gln Ala Tyr Ala Lys Asp Tyr Tyr Leu His Ile Lys			
35	40	45	
Ala Phe Pro Cys Tyr Leu Ser Ala Leu His Ala Arg Cys Asp Asp Leu			
50	55	60	
Gln Ile Arg Arg Gln Ile Leu Glu Asn Leu Met Asp Glu Glu Ala Gly			
65	70	75	80
Asn Pro Asn His Ile Asp Leu Trp Arg Gln Phe Ala Leu Ser Leu Gly			
85	90	95	
Val Ser Glu Glu Glu Leu Ala Asn His Glu Phe Ser Gln Ala Ala Gln			
100	105	110	
Asp Met Val Ala Thr Phe Arg Arg Leu Cys Asp Met Pro Gln Leu Ala			
115	120	125	
Val Gly Leu Gly Ala Leu Tyr Thr Tyr Glu Ile Gln Ile Pro Gln Val			
130	135	140	
Cys Val Glu Lys Ile Arg Gly Leu Lys Glu Tyr Phe Gly Val Ser Ala			
145	150	155	160
Arg Gly Tyr Ala Tyr Phe Thr Val His Gln Glu Ala Asp Ile Lys His			
165	170	175	
Ala Ser Glu Glu Lys Glu Met Leu Gln Thr Leu Val Gly Arg Glu Asn			
180	185	190	
Pro Asp Ala Val Leu Gln Gly Ser Gln Glu Val Leu Asp Thr Leu Trp			
195	200	205	
Asn Phe Leu Ser Ser Phe Ile Asn Ser Thr Glu Pro Cys Ser Cys Lys			
210	215	220	

<210> 58

<211> 65

<212> PRT

<213> C. psittaci

<400> 58

Asp Leu Trp Lys Asn Phe Ala Tyr Ala Leu Gly Val Thr Glu Glu Glu			
1	5	10	15
Leu Glu Asn His Val Pro Ser Ala Ala Ala Gln Lys Lys Val Asp Thr			
20	25	30	
Phe Leu Arg Trp Cys Thr Gly Asp Ser Leu Ser Ala Gly Val Ala Ala			
35	40	45	
Leu Tyr Thr Tyr Glu Ser Gln Ile Pro Thr Val Ala Glu Thr Lys Ile			
50	55	60	

Ser

65

<210> 59

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 59

gcagtcattc gcgttggaa

<210> 60
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 60
cgcagaacgg gacataactt g 21

<210> 61
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 61
tgatatcgcc gcgctcgctcg tc 22

<210> 62
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 62
ggatggcatg ggggagggca ta 22